

PENDING CLAIMS AS AMENDED

(MARKED UP VERSION)

Claims 1- 19 (cancelled)

20. (previously presented) Repair of the heart myocardium of a patient, the method comprising:
- (a) providing an implantable system comprising:
 - (i) a cell repopulation source comprising genetic material, stem cells, or a combination thereof, capable of forming new contractile tissue in and/or near an infarct zone of a patient's myocardium; and
 - (ii) an electrical stimulation device for electrically stimulating the new contractile tissue in and/or near the infarct zone of the patient's myocardium;
 - (b) implanting the cell repopulation source into and/or near the infarct zone of the myocardium of a patient;
 - (c) allowing sufficient time for new contractile tissue to form from the cell repopulation source; and
 - (d) electrically stimulating the new contractile tissue.
21. (original) The method of claim 20 wherein the electrical stimulation device comprises a muscle stimulator and electrodes; wherein the electrodes are implanted into and/or near the infarct zone of the myocardium.
22. (original) The method of claim 20 wherein the muscle stimulator is implantable and is in the form of a capsule having electrodes incorporated therein.
23. (original) The method of claim 22 wherein the muscle stimulator is a carrier for the cell repopulation source.
24. (original) The method of claim 23 wherein the muscle stimulator and cell repopulation source are delivered to the infarct zone through a catheter.

25. (original) The method of claim 20 wherein the undifferentiated contractile cells comprise autologous cells.